

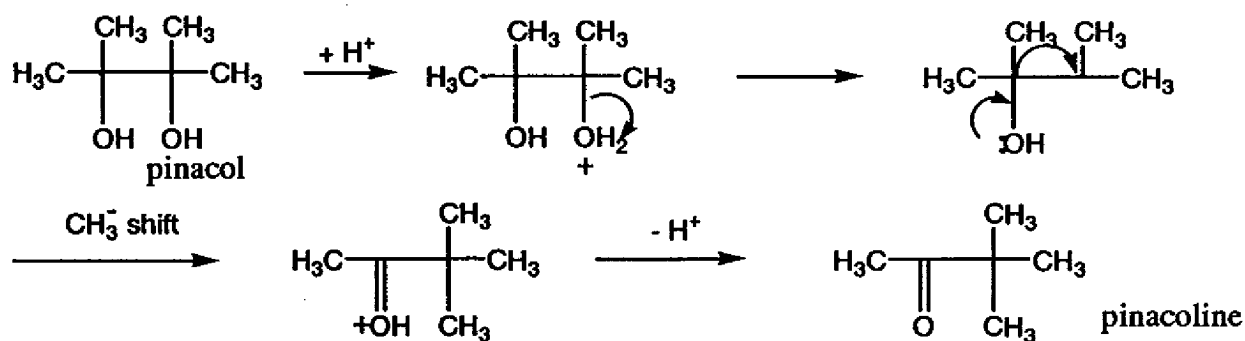
## REMARKS/ARGUMENTS

### *Claim Rejections – 35 U.S.C. § 102*

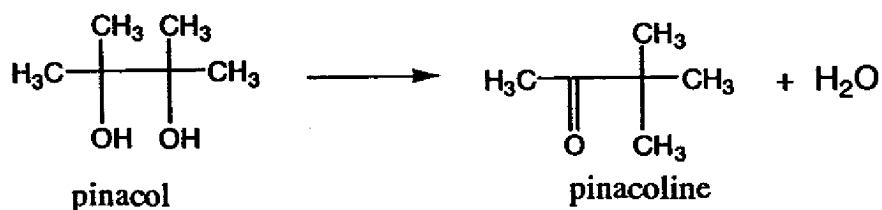
Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by Ikushima et al. (US 6,300,523). The Examiner pointed out that the reference discloses a process for preparing pinacolone by reacting pinacol in supercritical water. The reference does not expressly state that hydrogen is produced by the reaction; but, the Examiner contends that hydrogen will inherently be generated from the water molecules reacting in super critical state with the alcohol, i.e., pinacol.

However, applicants respectfully submit that hydrogen is never produced in the reaction as disclosed in the Ikushima et al. reference.

The reaction described in the Ikushima reference is a pinacol-pinacolone rearrangement reaction as follows:



The reaction can be summarized as:



In a pinacol-pinacolone rearrangement reaction, protons ( $H^+$ ), that is acidic conditions, are necessary, and in the Ikushima reference, protons are obtained from supercritical water. However, water-derived hydrogen from supercritical water is never produced in this reaction. In particular, pinacolone is produced from pinacol through rearrangement of a methyl group under acidic conditions, and is never produced by an oxidation reaction of the hydroxyl group of pinacol. For background on this reaction, an article describing pinacol rearrangement is enclosed (De Lezaeta, M. et al., "Effect of various acids at different concentration on the pinacol rearrangement," *Tetrahedron Letters* 43 (2002) 9307-9309).

In contrast to the process shown in the Ikushima reference, the present invention relates to a process of producing water-derived hydrogen and carbonyl compounds in which alcohol compounds are reacted with subcritical or supercritical water and converted into the corresponding carbonyl compounds. The process of the invention is neither suggested nor taught by the cited reference. Therefore, the present invention is not anticipated by Ikushima et al.

***Claim Rejections – 35 U.S.C. § 103***

Claims 2 – 13 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Ikushima et al. (US 6,300,523) and further in view of Catallo et al. (US 6,180,845). Since the process taught by Ikushima et al. does not produce hydrogen for reason discussed above, the present invention is clearly different and not obvious from the process described in Ikushima reference itself or further in view of the Catallo reference.

***Form PTO-1449***

The examiner also requested that the applicants submit a PTO-1449 for the IDS filed April 14, 2005. According to the records of the attorneys of record, PTO-1449 was already submitted by the applicants for the IDS filed April 14, 2005 but the form is not in the image file wrapper. A copy of the file record copy is enclosed. Our apologies if the

form was missing from the package submitted to the U.S. Patent and Trademark Office.

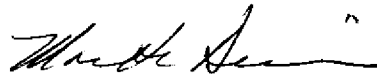
**CONCLUSION**

If the Examiner has any questions or suggested Examiner's amendments, the Examiner is respectfully requested to call the undersigned.

The Commissioner is hereby authorized to charge any additional fees, or to credit any overpayment, to Deposit Account No. 50-3195.

Respectfully submitted,

Date: April 17, 2006



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